



## EXECUTIVE COMPUTING

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# Don't take risks: Back up your disks regularly

**M**urphy's law states: If anything can go wrong, it will. And so it is with small computers. At some time or another, your small computer is going to fail, and when it does, it probably will result in the loss of important business information either in memory or on your disks.

Unfortunately, most people working with computers for the first time don't understand the importance of backup. Inevitably they get burned when a power surge destroys a circuit board or an accidental erasure wipes all the files off the disk. In this week's column, I'll provide you with a basic backup procedure that's inexpensive and easy to do.

### Why it's important

An adequate backup system helps guarantee that your business will survive both human and machine failures. Not surprisingly, in most cases lost data is caused by human error, and good procedures are especially important if non-technical operators are using your equipment.

Moreover, you may be required by law to keep backup copies of some of your business records. Each company needs to determine what records must be backed up and how long they must be saved. Two locations then should be identified to keep your copies — one near the computer and another "off-site."

Though there are installations around the country that provide special vaults for off-site computer files, most small computer users can get by with a bank safe deposit box or a fire-resistant safe at the owner's home.

### When to back up files

If your computer is used every day, "daily backup" of your daily transactions and current documents is an important habit to acquire. To

begin, you should make duplicates of all programs and documentation. Store the master disks and the photocopied documentation safely offsite. (Never use your master program disks for anything but making copies.)

Then, on a daily basis, only your current transactions and data files need to be backed up. And this can be done using a simple four-disk method that I'll describe. Consider the five or 10 minutes it takes as insurance. It could save you thousands in extra expenses later.

## Here's the best way

Let's assume, for simplicity's sake, that you have a small computer with two floppy disk drives. Common operating procedure is to always use your "program disk" (the floppy disk that contains your program, such as word processing, order entry, etc.) in drive A, and always put your "data disk" for that program (containing your documents or actual order records) in drive B. This is the normal way the computer is used, regardless of the application.

Since your program disks are already duplicated off-site, you need only worry about backing up the data disks. Here's how:

✓ First, for each data disk you have, obtain and format four additional blank disks. You can refer to these disks as #1, #2, #3 and #4.

We'll call your current data disk the "master," which will become your off-site copy.

✓ Second, copy your master disk to #1 and return the master to storage off-site.

✓ Begin the first day using #1 as your working copy. At the end of the day, back it up onto #2. Make a notation on the disk label of the date. Each time you do backups, mark the date on the label so you'll always know the status of that disk.

✓ Start the second day using #2 as your working disk. At the end of the day, back it up onto #3. The following day you will use #3 as the primary disk and back it up onto #1. Continue rotating the disks. If a disk ever fails or is accidentally erased, you will still have a copy from the previous day. You will lose only one day's data.

✓ At the end of the week, make a backup of the last disk in use onto #4 and store this off-site with your program disks. It becomes your new data "master" and the previous one can be brought back to the office and used as next week's #4 disk. If disaster strikes, or if an operator makes a mistake that fouls up all your on-site backups, you will be no more than a week behind.

Even with a set of procedures like this one, you should still not rely entirely on magnetic copies of your files. Use printouts to provide hard copy backup of crucial information. At a minimum, make copies of the ledger accounts each month, and all quarter and year-end reports. You should also make periodic hard copy backups of your crucial lists: customer records, inventory lists, etc.

And don't forget, hard disks need backup too, no matter what the manufacturers claim about reliability. It has often been said that it is not a question of *if* your hard disk will fail, only *when*. A similar procedure should be used with a backup tape drive or multiple floppies to back up your hard disk data — except the daily backups will not actually be used as new "working files." Instead, you merely make repetitive copies of your hard disk.

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